EXPLANATION OF PLATE III.

Actinocrinus semimultiramosus Whitf. The figure is from a photograph and is natural size. The stem of the upright specimen is continuous to the margin of the stone, passing under the edge of the recumbent specimen.

Article II.—OBSERVATIONS ON AND DESCRIPTIONS OF ARCTIC FOSSILS.

By R. P. WHITFIELD.

PLATES I AND II.

A few fossils, sent to the Museum by the Peary Arctic Club of New York, were collected by the Peary Expedition of 1898, at Cape Harrison, on Princess Marie Bay, and Summit, Cape d'Urville, in the arctic regions.

The latter specimen bears indications of fossil plants, and what may have been a *Helicotoma* or *Ophileta*, and reminds one of similar appearing things from the Calciferous formation of Lake Champlain. The specimen is evidently of float material, and consequently of little or no value geologically.

The remainder of the material consists of corals, partially silicified, in limestone, and one very good example of a *Receptaculites*, resembling *R. oweni* Hall from the lead-bearing beds of Illinois, Wisconsin, and Iowa. Among the corals, there is a representative of *Halysites agglomeratus* H., differing specifically; also a *Heliolites*, related to *H. pyriformis;* a new species of *Calapœcia* and a *Stromatopora*, probably *S. concentrica*. These specimens would indicate a geological horizon about the same as that of the New York Niagara or Clinton Group.

Some of the species are specifically distinct from their representatives in New York, and are described below under new names, with photographic figures of them on Plates I and II.

Receptaculites pearyi, n. sp.

Form explanate and undulating, resembling *R. oweni* Hall, of the western lead-bearing rocks, Galena Limestone. Cells proportionally large, and diverging concentrically, as is usual in the genus; at a distance from the central point of origin, they will measure nearly or quite 3 mm. in diameter; on the upper surface they are low-pyramidal and distinctly stellate under a hand glass. Disk near the centre thin, but at the distance mentioned above, the thickness will reach 16 to 19 mm. (five-eighths to three-fourths of an inch).

The specimen is from limestone and is entirely calcareous, the filling of the cells being crystalline. The principal specific feature is its large cells, and even close to the point of origin this is distinctly noticeable.

They are from the east side of the entrance of Cope Bay, Princess Marie Bay, Sept. 4, 1898.

Halysites agglomeratiformis, n. sp.

This species closely resembles *H. agglomeratus* of the New York Niagara Limestone, except that the cells are somewhat smaller, less closely compacted, having open meshes more like *H. catenopora* L., but not so large. The cell walls are very thin and fragile, the tabulæ in the tubes very closely arranged and flat, differing in this last feature from those of *H. agglomeratus*, which are generally quite deeply concave.

The examples of this species are from Cape Harrison, Princess Marie Bay, Sept. 4, 1898, and are somewhat silicified in a limestone matrix.

Calapœcia borealis, n. sp.

This is undoubtedly the *Clisiophyllum*, sp., of Salter, described in the appendix to Sutherland's 'Voyage to Baffin's Bay,' Vol. II, p. ccxxxi; and figured on Plate VI; Fig. 7. It is not a *Clisiophyllum*, not having a central axis; and it is not a *Favistella*, as the walls are densely perforated, and the tabulæ entire and complete. It seems to agree in all its features with *Calapœcia* Billings (=*Columnopora* of A. Nicholson), but differs from *C. crebriformis*, in either having larger cells or, when small, possessing an intercellular vesicular substance, in which case it closely resembles a *Heliolites*, and may readily be mistaken for *Heliolites macrostylus* Hall, which is most probably only a species of *Calapœcia*, and not a true *Heliolites*. As it is only known from an impression, or natural mould of the upper surface, its true generic relations are uncertain, the coral itself being as yet unknown. In this species, the cell openings vary from 3 to 4 mm. in diameter, and in most examples seen, the cells are divided only by thin walls, but in some of the examples the cells are separated by from 1 to 5 mm. of vesicular intercellular material. The cell walls, when seen on weathered specimens, have from three to five vertical rows of mural pores, which are more nearly quadrangular than round, and present much the appearance of an open textile substance. Tabulæ very closely arranged, three to five in a space equal to the diameter of the cell. Colony hemispherical, but those seen are mostly fragmentary.

The examples are from Cape Harrison, Princess Marie Bay, Sept. 4, 1898.

Heliolites perelegans, n. sp.

Corallum hemispherical in outline, with cells from one to one and a half mm. in diameter on the surface of the colony, with an intercellular substance of from one-half to sometimes more than two-thirds the diameter of the cell in thickness, and having from one to four vesicles in its thickness, as shown on longitudinal sections. Tabulæ very numerous and closely arranged, from four to seven occurring in a space equal to the diameter of the cell; occasionally incomplete, but rarely so; slightly convex upward or flat. No mural pores are present.

Differs from *Heliolites spinopora* Hall, in having complete tabulæ. From *H. elegans* of the same author it differs in its larger, more distant cells, and in its hemispherical instead of explanate form of growth. From *H. pyriformis* Hall, its nearest analogue, it differs in the less compact arrangement of the cells, and in the absence of longitudinal ray-like ridges projecting upon the tabulæ, which so distinctly mark the separated tube casts of that species.

Cape Harrison, Princess Marie Bay, in limestone, with *Receptaculites pearyi*, Sept. 4, 1898.

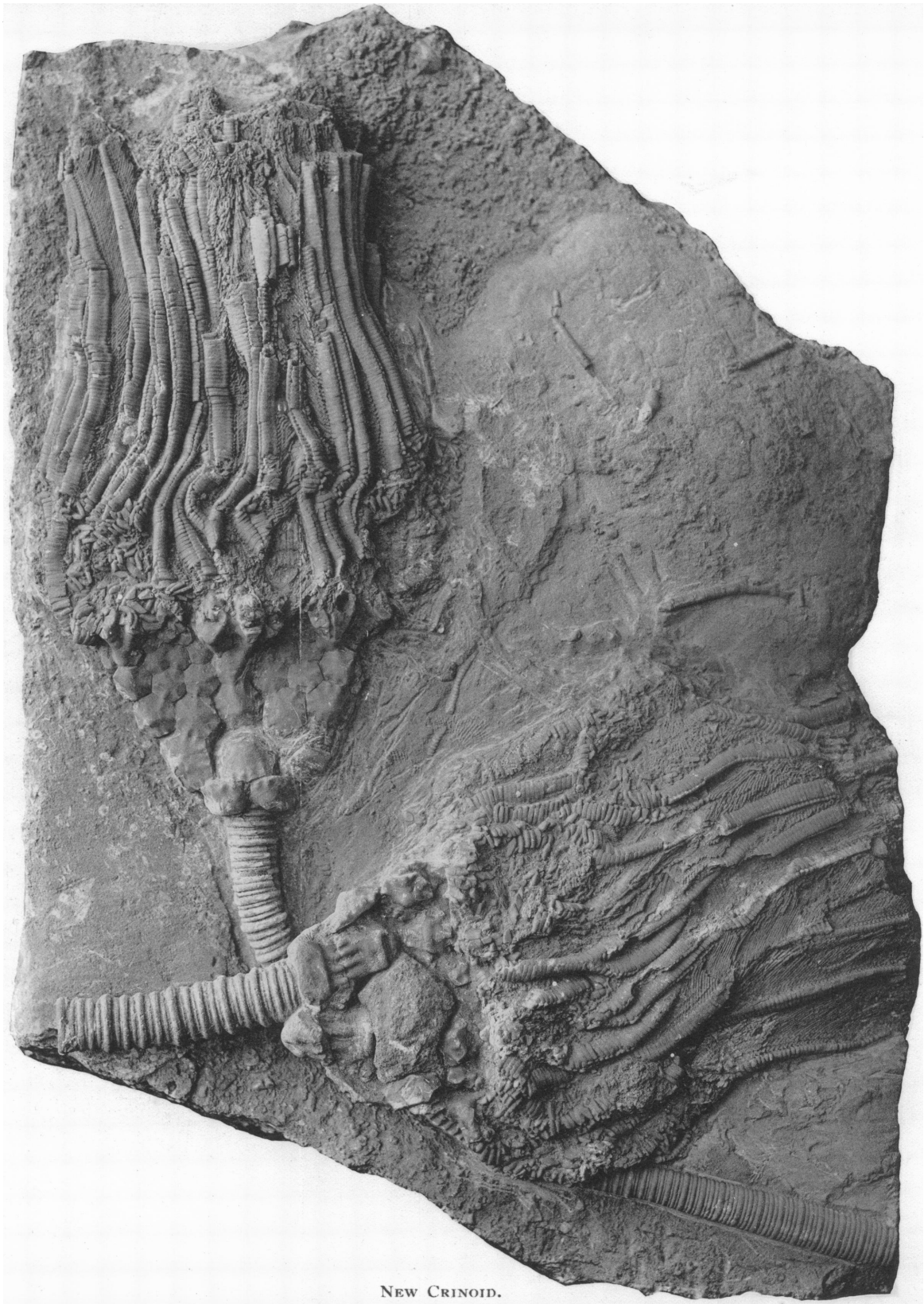
During the season of 1896 a few fossils were sent to Prof. Franz Boas by G. Cromer, Esq., of Boston, who obtained them from Eskimo who collected them near the head of Frobisher Bay.

The following species are represented:

Small *Zaphrentis* or *Streptelasma*, sp.?	4	Specimens
Orthis (Dalmanella) testudinaria Dalm. sp.	1	"
Orthis (Plectorthis) jamesi Hall	1	"
Cyclospira bisulcata Emmons, sp.	2	"
Strophomena planumbona Hall	1	"
Cyclospira, undescribed sp., plicated	2	"
Rhynchonella increbescens Hall, not *R. capax* Conrad	4	"
Tellinomya alta Hall	1	"
Murchisonia (Lophospira) tricarinata Hall, sp. = *M. milleri* Hall	2	"
Helicotoma planulata, or an undescribed sp.		Fragment
Bellerophon, sp. undisc., nearest to *B. lindsleyi* Safford	4	Specimens
Oncoceras plebium Hall	2	Fragments
Trochoceras, sp. undetermined	1	"
Trocholites, sp. undetermined	1	"

The geological horizon indicated by this group of specimens

would be lower Trenton. The specimens are from calcareous clay and are finely weathered, indicating a locality where fine collections of fossils might be obtained with little trouble. The specimens have been collected from the surface and are mostly of small size and imperfect, so much so that those representing undescribed forms are too poor for description and illustration, though sufficient to determine the geological position.



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